

SPECIFICATION AMENDMENTS

Page 5, lines 6-7:

FIGURE 11 shows the way in which the invention may applied to footwear, with or without insulation or padding; [[and]]

Page 5, line 8:

FIGURE 12 illustrates a glove or mitt application[.];

Page 5, line 9, insert:

Figure 13 depicts the rigid structure including a shoe;

Figure 14 shows the rigid structure including boot;

Figure 15 depicts the rigid structure including a fin;

Figure 16 illustrates an intermediate layer disposed between the inner surface of the band and the skin of a wearer; and

Figure 17 shows an intermediate perforated layer disposed between the inner surface of the band and the skin of a wearer.

Page 5, line 20 to page 6, line 2:

In the embodiment of Figure 2, a hinged brace is attached to one or both sides of the sleeve material, though, as will be appreciated from the description of alternative embodiments below, non-hinged, i.e., stiffening members ~~membranes~~, may alternatively be utilized. In the arrangement of Figure 2, the device includes a hinged portion 220, connected to rigid members ~~membranes~~ 224, 226 which, in turn, are fastened to the material 204 through any suitable means, including permanent bonding through thermal or chemical adhesion, or temporarily through snap-type fasteners, Velcro®, straps, sleeves, and the like. In the preferred embodiment, a temporary securement is used, allowing the sleeve to be placed over the appendage, evacuated for a tight fit, followed by the application of the hinged or rigid brace member.

Page 6, lines 3-12:

Although a single sleeve such as 204 in Figure 2 may be used, in alternative embodiments, separate sleeves 302, 304, may be used on either side of a joint, such as the knee joint shown, or other joints such as the hip, elbow, wrist, ankle, shoulder, and so forth. In the embodiment of Figure 3, an upper sleeve 302 is evacuated through port 308, and a lower sleeve 304 is evacuated through a separate port 306. Again, opposing bands such as 307 ~~[[306]]~~ may be provided to assist with the evacuation process. A hinge 320 connects to rigid members 324, 326 which are adhered to the respective sleeves 302, 304 through any appropriate means as discussed with reference to Figure 2. Additionally, though not shown, hinges such as 220, 320 may be provided with dials and gages to permit a particular range of motion, as with conventional braces.

Page 6, line 27 to page 7, line 6:

Figure 7 illustrates a ankle-related embodiment, depicted generally at 700, including a band 702 evacuable through a port 706, and a brace member 704 attached to the band 702 at points 708 through any suitable means as discussed elsewhere herein. The advantages of the invention is that, particularly with respect to leg-related and load-bearing applications, once the band or sleeve is evacuated against the skin, so little slippage occurs that the member element 704, shown in Figure 7 allows little if any weight to be applied to the foot, but rather, is applied to the band 702 and distributed to the upper portion of the leg, thereby enabling maladies associated with the foot to heal that much more quickly.

Page 7, lines 7-19:

Figure 8 begins a series of drawings which shows the way in which the invention is applicable to prosthetic as well as orthotic devices, namely, to artificial limbs. Figure 8, in particular, illustrates the applicability of the invention to an artificial foot or lower leg, including a ground-contacting foot portion 806, having a cavitation to receive the stump of the wearer, above which there is provided a band 802 evacuable through a port 803. The areas in broken-line illustrated form 810, 812, show that the band 802 can be of any appropriate length of the leg to ensure sufficient weight-carrying capability. The brace member 804, attached to the foot portion 806 at 820 and the band 802 at 822, facilitates weight distribution and equalizes contact

between the stump and the cavitation within the lower portion 806. In the event that one or more brace members such as 804 are not required, the top of the prosthesis may simply terminate in an evacuable member, to hold the prosthesis on without falling off, and without the need for additional rigid elements.

Page 7, line 28 to page 8, line 12:

In addition to orthotic and prosthetic devices, the invention is applicable to non-medical and non-orthopedic applications, including sport-related gear such as athletic shoes, cross-country and downhill ski boots, gloves and mitts. Figure 11, for example, shows a foot-covering application, including an evacuable sleeve 1102 coupled to a layer 1110, which may be used to absorb shock, and/or function as a thermal barrier. For example, in a ski and athletic shoe applications, the evacuable sleeve may contact the majority of the foot, with the layer 1110 being bonded to the outside of the sleeve for cushioning and/or warmth. Alternatively, the layer may be bonded to the inside of the sleeve or eliminated partially or entirely if the sleeve is evacuated over a stocking, for example. As a further alternative, the use of a vacuum may be limited to a region above the foot, in which case an evacuable band such as 1111 ~~[[1110]]~~ in Figure 11 may be provided in conjunction with an otherwise conventional shoe or boot. In some applications, such as cross-country ski boots and swim fins, and the like, the toes may remain exposed for further comfort and flexibility.

Page 9, line 3, insert:

Figure 13 depicts the rigid structure including a shoe. Figure 14 shows the rigid structure including boot. Figure 15 depicts the rigid structure including a fin. Figure 16 illustrates an intermediate layer disposed between the inner surface of the band and the skin of a wearer. Figure 17 shows an intermediate perforated layer disposed between the inner surface of the band and the skin of a wearer.